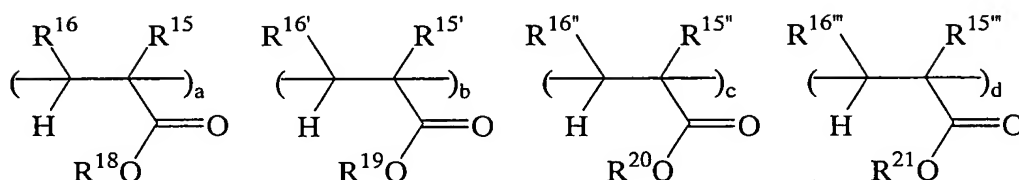
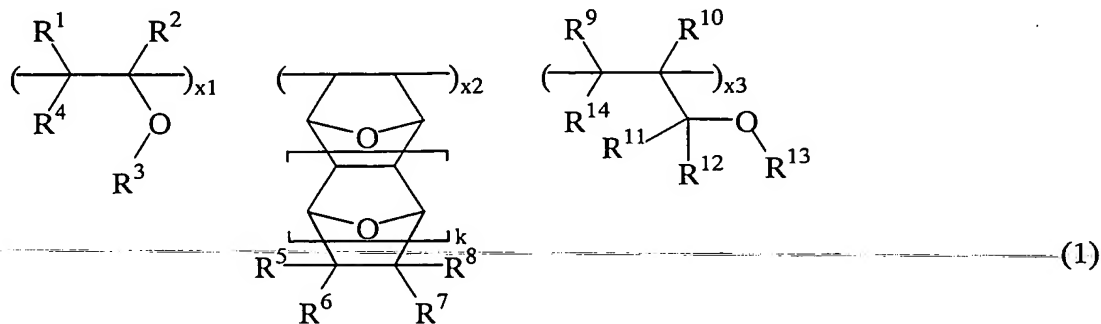


1. A polymer comprising recurring units of the following general formula (1) and having a weight average molecular weight of 1,000 to 500,000,



wherein R¹ and R² each are hydrogen or methyl,

R³ and R⁴ each are hydrogen or a straight, branched or cyclic, monovalent hydrocarbon group of 1 to 15 carbon atoms which may contain a hetero atom, and R³ and R⁴ may bond together to form a ring, wherein R³ and R⁴ together represent a straight, branched or cyclic, divalent hydrocarbon group of 1 to 15 carbon atoms which may contain a hetero atom,

each of R⁵ to R⁸ is hydrogen, a hydroxyl group or a straight, branched or cyclic, monovalent hydrocarbon group of 1 to 15 carbon atoms which may contain a hetero atom, at least one of R⁵ to R⁸ contains a hetero atom, any two of R⁵ to R⁸ may bond together to form a ring, wherein the ring-forming two R's together represent a straight, branched or cyclic, divalent hydrocarbon group of 1 to 15 carbon atoms which may contain a hetero atom,

R⁹ and R¹⁰ each are hydrogen or methyl,

each of R¹¹ to R¹⁴ is hydrogen or a straight, branched or cyclic, monovalent hydrocarbon group of 1 to 15 carbon

atoms which may contain a hetero atom, a pair of R^{11} and R^{12} , a pair of R^{11} or R^{12} and R^{13} , a pair of R^{11} or R^{12} and R^{14} , or a pair of R^{13} and R^{14} may bond together to form a ring, wherein each pair represents a straight, branched or cyclic,

5 divalent hydrocarbon group of 1 to 15 carbon atoms which may contain a hetero atom,

R^{15} is hydrogen, methyl or $CH_2CO_2R^{17}$,

$R^{15'}$ is hydrogen, methyl or $CH_2CO_2R^{17'}$,

$R^{15''}$ is hydrogen, methyl or $CH_2CO_2R^{17''}$,

10 $R^{15'''}$ is hydrogen, methyl or $CH_2CO_2R^{17'''}$,

R^{16} is hydrogen, methyl or CO_2R^{17} ,

$R^{16'}$ is hydrogen, methyl or $CO_2R^{17'}$,

$R^{16''}$ is hydrogen, methyl or $CO_2R^{17''}$,

$R^{16'''}$ is hydrogen, methyl or $CO_2R^{17'''}$,

15 R^{17} , $R^{17'}$, $R^{17''}$ and $R^{17'''}$ may be identical or different between R^{15} and R^{16} , between $R^{15'}$ and $R^{16'}$, between $R^{15''}$ and $R^{16''}$, and between $R^{15'''}$ and $R^{16'''}$, respectively, and each is a straight, branched or cyclic alkyl group of 1 to 15 carbon atoms,

20 R^{18} is hydrogen or a monovalent hydrocarbon group of 1 to 15 carbon atoms containing a carboxyl or hydroxyl group,

R^{19} is a monovalent hydrocarbon group of 2 to 15 carbon atoms containing at least one partial structure selected from the group consisting of ether, aldehyde, ketone, ester, 25 carbonate, acid anhydride, amide and imide,

R^{20} is a polycyclic hydrocarbon group of 7 to 15 carbon atoms or an alkyl group containing a polycyclic hydrocarbon group,

R^{21} is an acid labile group,

30 k is 0 or 1,

x_1 , x_2 , x_3 , a , b , c and d represent a molar compositional ratio of the recurring units associated therewith, satisfying $x_1+x_2+x_3+a+b+c+d = 1$, x_1 , x_2 , x_3 , a , b and c are numbers inclusive of 0, d is a number of more than 35 0, all of x_1 , x_2 and x_3 are not equal to 0 at the same time.

2. The polymer of claim 1 wherein the acid labile group represented by R^{21} in formula (1) is a tertiary alkyl group having a cyclic structure.

5 3. A resist composition comprising the polymer of claim 1.

4. A process for forming a resist pattern comprising the steps of:

applying the resist composition of claim 3 onto a
10 substrate to form a coating,
heat treating the coating and then exposing it to
high-energy radiation or electron beam through a photo mask,
and

optionally heat treating the exposed coating and
15 developing it with a developer.

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